

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~strikethrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please CANCEL claims, AMEND claims, and ADD new claims, in accordance with the following:

1. (CURRENTLY AMENDED) A driving method of an AC type plasma display panel including a display screen in which first display electrodes and second display electrodes are arranged in spaced relationship so as to form plural surface discharge gaps corresponding to plural rows for rows of a matrix display, and the a relative position relationship of between the first and the second display electrodes defining neighboring rows, forming a surface discharge gap in the a row arrangement direction, is opposite between neighboring two rows, and terminals for supplying electricity to the first and the second display electrodes are divided into both sides of a display screen, and respective terminals, connected to the first and the second display electrodes to supply electricity thereto, are located at respective, opposite sides of the display screen, the method comprising the steps of:

~~setting plural electrode unit pairs about the first display electrodes by making a unit of each of electrode arrays including the first display electrode neighboring only the second display electrode and the plural first display electrodes arranged without including a surface discharge gap and by dividing the first display electrodes by two units;~~

~~setting plural electrode unit pairs about the second display electrodes by making a unit of each of electrode arrays including the second display electrode neighboring only the first display electrode and the plural second display electrodes arranged without including a surface discharge gap and by dividing the second display electrodes by two units;~~

dividing the first display electrodes into plural pairs of first complementary display electrodes, each of the first complementary display electrodes being made up of one first display electrode adjacent only to one second display electrode;

dividing the second display electrodes into plural pairs of second complementary display electrodes, each of the second complementary display electrodes being made up of one second display electrode adjacent only to one first display electrode; and

generating a display discharges by changing potentials of the first and the second

display electrodes so that a potential change has a complementary relationship between one first complementary display electrode and the other first complementary display electrode of a selected pair of complementary first display electrodes, for each of the first complementary display electrode pairs in succession, as well as between one second complementary display electrode and the other second complementary display electrode of a selected pair of complementary second display electrodes, in alternate succession with the first complementary display electrode pairs, for each of the second complementary electrode pairs between the first display electrode units as well as between the second display electrode units of the electrode unit pair, and so that a sustaining voltage is applied to the surface discharge gap at the ratio of one row per k ($k \geq 2$) rows, and that the surface discharge gaps to which the sustaining voltage is applied are changed sequentially.

2. (ORIGINAL) A driving method of an AC type plasma display panel in which first display electrodes and second display electrodes are arranged so as to form surface discharge gaps for rows of a matrix display, and the position relationship between the first and the second display electrodes forming a surface discharge gap in the row arrangement direction is opposite between neighboring two rows, and terminals for supplying electricity to the first and the second display electrodes are divided into both sides of a display screen, the method comprising the steps of:

dividing the first display electrodes into k ($k \geq 2$) groups by making a unit of each of electrode arrays including the first display electrode neighboring only the second display electrode and the plural first display electrodes arranged without including a surface discharge gap and by dividing the first display electrodes in the arrangement order by one unit; and

generating a display discharge by applying a rectangular voltage pulse train having a constant period to the first display electrodes sequentially by one group while shifting the rectangular voltage pulse train by the time corresponding to a pulse width multiplied by $2/k$, and by applying another rectangular voltage pulse train similar to the rectangular voltage pulse train to the second display electrodes so that the shift between neighboring first display electrodes becomes the time corresponding to a pulse width multiplied by $1/k$.

3. (CURRENTLY AMENDED) A driving method of an AC type plasma display panel having a display screen in which first display electrodes and second display electrodes are arranged in spaced relationship so as to form plural surface discharge gaps for defining corresponding, plural rows of a matrix display and so that two neighboring two rows share one

~~electrode for display, and terminals for supplying electricity to the first and the second display electrodes are divided into both sides of a display screen respective terminals, connected to the first and the second display electrodes to supply electricity thereto, are located at respective, opposite sides of the display screen, the method comprising the steps of:~~

~~setting plural electrode pairs about the first display electrodes by dividing the first display electrodes by two relating the first display electrodes as plural complementary pairs of display electrodes;~~

~~relating the second display electrodes as plural complementary pairs of second display electrodes;~~

~~setting plural electrode pairs about the second display electrodes by dividing the second display electrodes by two; and~~

~~generating a display discharges by changing potentials of the first and the second display electrodes so that a potential change and resulting current flow has a complementary relationship between the first display electrodes as well as between the second display electrodes successively selected, first and second display electrodes of each pair of first and second complementary display electrodes, in succession for all first and second display electrodes of the first and second complementary pairs thereof, and so that a sustaining voltage is applied across the display electrodes at the ratio of one row per k ($k \geq 2$) rows, and that the interelectrodes to which the sustaining voltage is applied are changed sequentially.~~

4. (ORIGINAL) A driving method of an AC type plasma display panel in which first display electrodes and second display electrodes are arranged so as to form surface discharge gaps for rows of a matrix display and so that neighboring two rows share one electrode for display, and terminals for supplying electricity to the first and the second display electrodes are divided into both sides of a display screen, the method comprising the steps of:

dividing the first display electrodes into k ($k \geq 2$) groups by dividing the first display electrodes in the arrangement order one by one; and

generating a display discharge by applying a rectangular voltage pulse train having a constant period to the first display electrodes sequentially by one group while shifting the rectangular voltage pulse train by the time corresponding to a pulse width multiplied by $2/k$, and by applying another rectangular voltage pulse train similar to the rectangular voltage pulse train to the second display electrodes so that the shift between neighboring first display electrodes becomes the time corresponding to a pulse width multiplied by $1/k$.

5. (ORIGINAL) The driving method according to claim 4, wherein a duty ratio of the rectangular voltage pulse train is 50%.

6. (ORIGINAL) The driving method according to claim 4, further comprising the step of applying a sustaining voltage pulse having a larger pulse width than that of the rectangular voltage pulse train to the first display electrodes and the second display electrodes prior to the application of the rectangular voltage pulse train.

7. (ORIGINAL) A driving method of an AC type plasma display panel in which first display electrodes and second display electrodes are arranged so as to form surface discharge gaps for rows of a matrix display and so that two first display electrodes and two second display electrodes except both ends of the display electrode arrangement are arranged alternately, and terminals for supplying electricity to the first and the second display electrodes are divided into both sides of a display screen, the method comprising the steps of:

setting plural electrode unit pairs about the first display electrodes by dividing the first display electrodes by a unit of neighboring two first display electrodes;

setting plural electrode unit pairs about the second display electrodes by dividing the second display electrodes in the same way;

dividing the first display electrodes into k ($k \geq 2$) groups by dividing the first display electrodes corresponding to the plural electrode unit pairs in the arrangement order by one unit;

applying a rectangular voltage pulse train having a constant period to the first display electrodes sequentially by one group while shifting the rectangular voltage pulse train by the time corresponding to a pulse width multiplied by $2/k$ so that the potential changes have a complementary relationship between the first display electrode units of the electrode unit pair; and

generating a display discharge by applying another rectangular voltage pulse train similar to the rectangular voltage pulse train to the second display electrodes so that potential changes have a complementary relationship between the second display electrode units of the electrode unit pair and that the shift between neighboring first display electrodes becomes the time corresponding to a pulse width multiplied by $1/k$.

8. (ORIGINAL) The driving method according to claim 7, wherein a duty ratio of the rectangular voltage pulse train is 50%.

9. (ORIGINAL) The driving method according to claim 7, further comprising the step of applying a sustaining voltage pulse having a larger pulse width than that of the rectangular voltage pulse train to the first display electrodes and the second display electrodes prior to the application of the rectangular voltage pulse train.

10. (CANCELED)

11. (CURRENTLY AMENDED) A display device comprising an AC type plasma display panel including a display screen in which first display electrodes and second display electrodes are arranged in spaced relationship so as to form plural surface discharge gaps, corresponding to plural rows for rows of a matrix display, and the a relatively position relationship between the of first and the second display electrodes defining neighboring rows, forming a surface discharge gap in the a row arrangement direction, is opposite between neighboring two rows, and terminals for supplying electricity to the first and the second display electrodes are divided into both sides of a display screen and respective terminals, connected to the first and the second display electrodes to supply electricity thereto, are located at respective, opposite sides of the display screen, wherein

plural electrode unit pairs are set about the first display electrodes by making a unit of each of electrode arrays including the first display electrode neighboring only the second display electrode and the plural first display electrodes arranged without including a surface discharge gap and by dividing the first display electrodes by two units,

plural electrode unit pairs are set about the second display electrodes by making a unit of each of electrode arrays including the second display electrode neighboring only the first display electrode and the plural second display electrodes arranged without including a surface discharge gap and by dividing the second display electrodes by two units, and

the first display electrodes are divided into plural pairs of first complementary display electrodes, each of the first complementary display electrodes being made up of one first display electrode adjacent only to one second display electrode;

the second display electrodes are divided into plural pairs of second complementary display electrodes, each of the second complementary display electrodes being made up of one second display electrode adjacent only to one first display electrode; and

a driving circuit is provided for generating a generates display discharges by changing potentials of the first and the second display electrodes so that a potential change has a complementary relationship between the first display electrode units as well as between the

~~second display electrode units of the electrode unit pair between one first complementary display electrode and the other first complementary display electrode of a selected pair of complementary first display electrodes, for each of the first complementary display electrode pairs in succession, as well as between one second complementary display electrode and the other second complementary display electrode of a selected pair of complementary second display electrodes, in alternate succession with the first complementary display electrode pairs, for each of the second complementary electrode pairs, and that a sustaining voltage is applied to the surface discharge gap at the ratio of one row per k (k ≥ 2) rows, and that the surface discharge gaps to which the sustaining voltage is applied are changed sequentially.~~

12. (ORIGINAL) A display device comprising an AC type plasma display panel in which first display electrodes and second display electrodes are arranged so as to form surface discharge gaps for rows of a matrix display, and the position relationship between the first and the second display electrodes forming a surface discharge gap in the row arrangement direction is opposite between neighboring two rows, and terminals for supplying electricity to the first and the second display electrodes are divided into both sides of a display screen, wherein

the first display electrodes are divided into k ($k \geq 2$) groups by making a unit of each of electrode arrays including the first display electrode neighboring only the second display electrode and the plural first display electrodes arranged without including a surface discharge gap and by dividing the first display electrodes in the arrangement order by one unit, and

a driving circuit is provided for generating a display discharge by applying a rectangular voltage pulse train having a constant period to the first display electrodes sequentially by one group while shifting the rectangular voltage pulse train by the time corresponding to a pulse width multiplied by $2/k$, and by applying another rectangular voltage pulse train similar to the rectangular voltage pulse train to the second display electrodes so that the shift between neighboring first display electrodes becomes the time corresponding to a pulse width multiplied by $1/k$.

13. (NEW) A driving method of an AC type plasma display panel including a display screen in which first display electrodes and second display electrodes arranged in spaced relationship so as to form plural surface discharge gaps corresponding to plural rows of a matrix display, and a position relationship, between the first and the second display electrodes corresponding to two arbitrary rows neighboring the former rows in a row arrangement direction is opposite between the two arbitrary rows, and respective terminals, connected to the

first and the second display electrodes to supply electricity thereto, are located at respective, opposite sides of the display screen, the method comprising :

dividing the first display electrodes into plural pairs of first complementary display electrodes, each of the first complementary display electrodes being made up of the two first display electrodes arranged without a surface discharge gap therebetween;

dividing the second display electrodes into plural pairs of second complementary display electrodes, each of the second complementary display electrodes being made up of two second display electrodes arranged without a surface discharge gap therebetween; and

generating display discharges by changing potentials of the first and the second display electrodes so that a potential change has a complementary relationship between one first complementary display electrode and the other first complementary display electrode of a selected pair of complementary first display electrodes, for each of the first complementary display electrode pairs in succession as well as between one second complementary display electrode and the other second complementary display electrode of a selected pair of complementary second display electrodes, in alternate succession with the first complementary display electrode pairs, for each of the second complementary electrode pairs and that a sustaining voltage is applied to the surface discharge gap at the ratio of one row per k ($k \geq 2$) rows, and so that the surface discharge gaps to which the sustaining voltage is applied are changed sequentially.